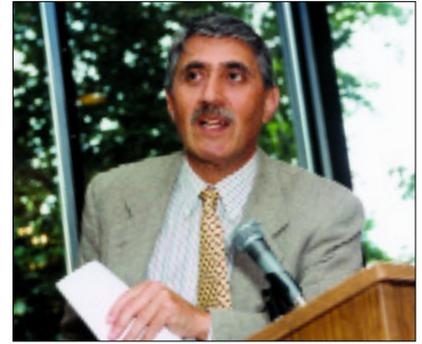


## Message from the Director



The research mission of the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) encompasses a wide array of chronic diseases and other serious illnesses affecting tens of millions of Americans. As we review recent successes and set new goals for effectively combating these diseases, we at the NIDDK are pleased to present this document, our third annual compendium of highlights in NIDDK-supported basic and clinical research. Over the past year, researchers supported by this Institute have continued to expand knowledge about basic cellular and molecular processes, and to capitalize on this knowledge to improve treatments for people suffering from many debilitating diseases. We are steadily uncovering and characterizing the complex molecular pathways involved in the development of type 1 and type 2 diabetes, obesity, digestive and liver diseases, kidney disease, urologic disorders, and blood diseases. In turn, we are also seeing the translation of these basic research advances into clinical applications through vigorous efforts to take research from “the bench to the bedside.”

The examples of research advances collected in this booklet represent a substantial return on the significant investment that has been made in research by Congress and the President over the past several years. As we move into the future, this commitment to basic and clinical research will provide fertile ground for researchers and tremendous scientific opportunities. This is truly an exciting time for biomedical research. For example, every day we learn more about how genes interact in complex ways with each other and with the environment either to promote or to protect us from disease. Furthermore, revolutionary changes in computing and biotechnologies are providing researchers with ever more powerful tools with which to approach basic and clinical research problems. The advances contained in this booklet tell an important part of this story.

Along with research advances, we have included brief essays about five leading scientists and their visions of the future of research with respect to diabetes, obesity, digestive diseases, kidney disease, and urologic diseases. As in past years, we also feature several “Stories of Discovery,” which are intended to illustrate how today’s science advances are built on a strong foundation of past research accomplishments. Within these pages you will also find profiles of several people affected by diseases such as type 1 diabetes, inflammatory bowel disease, and interstitial cystitis. These stories illustrate the ways in which NIDDK-supported research is affecting the lives of patients, and they remind us that the ultimate purpose of biomedical research is to preserve health and to benefit people touched by disease.

No single publication could capture the sweeping breadth and depth of new knowledge and insights that have been gained during the past year. Rather, our intention is to provide an overview of some of the major advances, along with a discussion of why they are of particular significance. It is our hope that you will find these advances an exciting and promising reflection of the NIDDK’s many contributions to the national biomedical research enterprise.

**Allen M. Spiegel, M.D.**

*Director*

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Department of Health and Human Services